

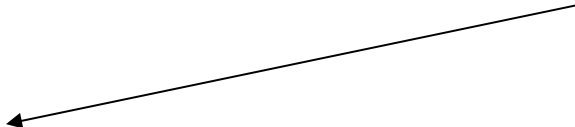
**ustemps.sas**

```
data temps;
  input city $ 1-19 temp lat long;
  cards;
Mobile, AL      44      31.2    88.5
Montgomery, AL 38      32.9    86.8
Phoenix, AZ     35      33.6    112.5
Little Rock, AR 31      35.4    92.8
Los Angeles, CA 47      34.3    118.7
San Francisco, CA 42     38.4    123.0
Denver, CO      15      40.7    105.3
New Haven, CT  22      41.7    73.4
Wilmington, DE 26      40.5    76.3
Washington, DC 30      39.7    77.5
Jacksonville, FL 45     31.0    82.3
Key West, FL   65      25.0    82.0
Miami, FL      58      26.3    80.7
Atlanta, GA    37      33.9    85.0
Boise, ID      22      43.7    117.1
Chicago, IL    19      42.3    88.0
Indianapolis, IN 21     39.8    86.9
Des Moines, IA 11      41.8    93.6
Wichita, KS    22      38.1    97.6
Louisville, KY 27      39.0    86.5
New Orleans, LA 45      30.8    90.2
Portland, ME   12      44.2    70.5
Baltimore, MD 25      39.7    77.3
Boston, MA     23      42.7    71.4
Detroit, MI    21      43.1    83.9
Minneapolis, MN 2      45.9    93.9
St. Louis, MO  24      39.3    90.5
Helena, MT     8      47.1    112.4
Omaha, NE      13      41.9    96.1
Concord, NH    11      43.5    71.9
Atlantic City, NJ 27     39.8    75.3
Albuquerque, NM 24     35.1    106.7
Albany, NY     14      42.6    73.7
New York, NY   27      40.8    74.6
Charlotte, NC  34      35.9    81.5
Raleigh, NC   31      36.4    78.9
Bismarck, ND   0      47.1    101.0
Cincinnati, OH 26     39.2    85.0
Cleveland, OH  21     42.3    82.5
Oklahoma City, OK 28     35.9    97.5
Portland, OR   33      45.6    123.2
Harrisburg, PA 24     40.9    77.8
Philadelphia, PA 24     40.9    75.5
Charleston, SC 38     33.3    80.8
Nashville, TN  31     36.7    87.6
Amarillo, TX   24     35.6    101.9
Galveston, TX  49     29.4    95.5
Houston, TX    44     30.1    95.9
Salt Lake City, UT 18     41.1    112.3
Burlington, VT 7      45.0    73.9
Norfolk, VA    32     37.0    76.6
Seattle, WA    33     48.1    122.5
Spokane, WA    19     48.1    117.9
Madison, WI    9      43.4    90.2
Milwaukee, WI  13     43.3    88.1
Cheyenne, WY   14     41.2    104.9
;
```

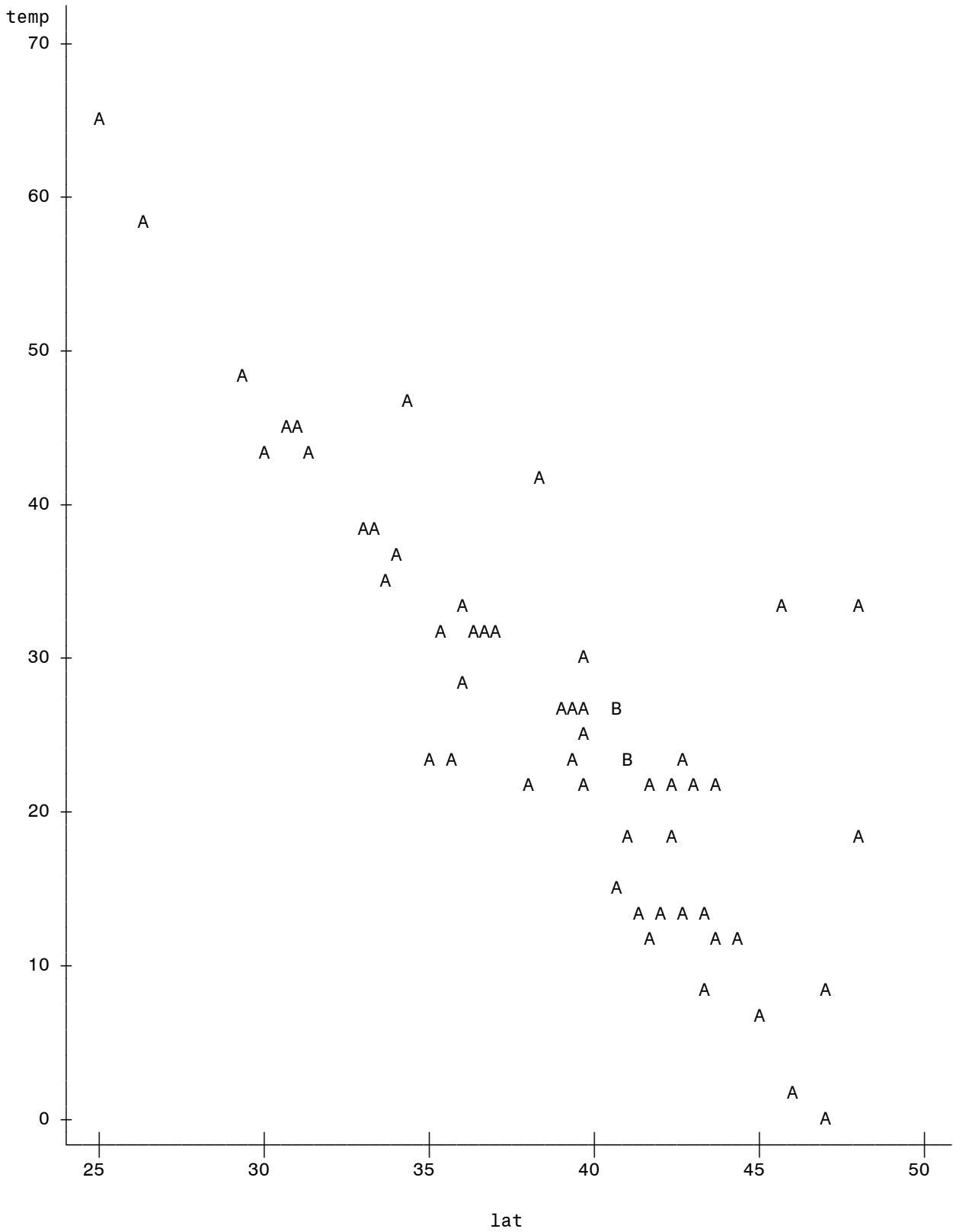
```
proc plot;
  plot temp*lat;
run;

proc corr;
  var temp lat;
run;

proc reg;
  model temp=lat;
run;
```



Plot of temp\*lat. Legend: A = 1 obs, B = 2 obs, etc.



## The CORR Procedure

2 Variables: temp lat

## Simple Statistics

Variable	N	Mean	Std Dev	Sum	Minimum	Maximum
temp	56	26.51786	13.37976	1485	0	65.00000
lat	56	38.96964	5.37854	2182	25.00000	48.10000

## Pearson Correlation Coefficients, N = 56

Prob &gt; |r| under H0: Rho=0

	temp	lat
temp	1.00000	-0.84804 <.0001
lat	-0.84804 <.0001	1.00000

## The REG Procedure

Model: MODEL1

Dependent Variable: temp

Number of Observations Read	56
Number of Observations Used	56

## Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	7080.87305	7080.87305	138.28	<.0001
Error	54	2765.10909	51.20572		
Corrected Total	55	9845.98214			

Root MSE	7.15582	R-Square	0.7192
Dependent Mean	26.51786	Adj R-Sq	0.7140
Coeff Var	26.98490		

## Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr >  t
Intercept	1	108.72774	7.05610	15.41	<.0001
lat	1	-2.10959	0.17940	-11.76	<.0001